



Attorney Docket No. 58288 (72021)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: T. Yoon et al.

U.S.S.N.: 10/645,312

Art Unit: 2855

FILED: August 20, 2003

Examiner: Unknown

FOR: 5-SUBSTITUTED-2-ARYLPYRAZINES

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, Alexandria VA 22313-1450 on March 12, 2004.

By: \_\_\_\_\_

*Michelle P. Chicos*

Michelle P. Chicos

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Arlington, VA 22313-1450

Date: March 12, 2004

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

II. COPIES

a. ☒

Submitted herewith is a legible copy of (i) each U.S and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.

III. CONCISE EXPLANATION OF THE RELEVANCE  
(check at least one box)

- a. ☒ Except as may be indicated below in (b), all of the patents, publications or other information are in the English language or were cited in an English language Search Report, a copy of which is attached hereto (concise explanation not required).
- b. ☒ A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:
- See English language abstract for references BH and BI.
- c. ☐ The following additional information is provided for the Examiner's consideration:

IV. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b)  
(check one box)

- a. ☐ within three months of the filing date of a national application (37 C.F.R. § 1.97(b) (1)). No fee or certification is required.
- b. ☐ within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b) (2)). No fee or certification is required.
- c. ☒ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b) (3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS' under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below, or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

V. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):  
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c) (1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c) (2)).

- a. ☐ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
- or
- b. ☐ See the certification below. No fee is required.

VI. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(d):  
(check both boxes if applicable)

before payment of the Issue Fee (See 37 C.F.R. § 1.97(d).

- a. ☐ See the certification below; and
- b. ☐ A fee in the amount of \$180.00 is enclosed as required by 37 C.F.R. § 1.17(p).

VII. CERTIFICATION UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby certifies that

- a. ☒ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.
- c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned certifies that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

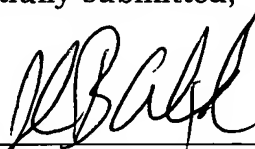
☐ Please charge Deposit Account No. 04-1105 in the amount of \_\_\_\_\_ for the above-indicated fee. A triplicate copy of this paper is attached.

☒ No fee is required.

However, if any fee is required, e.g., due to issuance of a Final Office Action, please charge the required fee to Deposit Account No. 04-1105, and consider this paper as a conditional petition under 37 CFR 1.97(d).

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition, if necessary) and charge the appropriate fee to Deposit Account No. 04-1105.

Respectfully submitted,



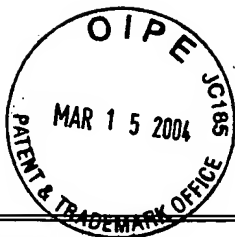
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John B. Alexander, Ph.D. (Reg. No. 48,399)  
EDWARDS & ANGELL, LLP  
P.O. Box 55874  
Boston, MA 02205

Date: March 12, 2004

Tel: (617) 439-4444

Customer No. 21874



<b>FORM PTO-1449</b> <b>INFORMATION DISCLOSURE STATEMENT</b>				ATTY DOCKET NO. 58288(72021)		SERIAL NO. 10/645,315	
				APPLICANT(S): T. Yoon et al.			
				FILING DATE: August 20, 2003		ART UNIT: 2855	
<b>UNITED STATES PATENT DOCUMENTS</b>							
<b>EXAM. INITIAL</b>		<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>NAME</b>	<b>CLASS</b>	<b>SUB CLASS</b>	<b>FILE DATE IF APPR</b>
	AA	4,788,197	11/1988	Wakabayashi et al.			
	AB	4,293,552	10/1981	Miesel			
	AC	4,211,870	07/1980	Barnett et al.			
	AD	4,160,834	07/1979	Miesel			
	AE	4,083,977	04/1978	Miesel			
<b>FOREIGN PATENT DOCUMENTS</b>							
		<b>DOCUMENT NUMBER</b>	<b>PUBLISHED DATE</b>	<b>COUNTRY</b>	<b>CLASS</b>	<b>SUB CLASS</b>	<b>TRAN YES/NO</b>
	BA	1 499 768	02/1978	Germany			
	BB	WO 01/60806 A2	08/2001	WIPO			
	BC	WO 00/45800	08/2000	WIPO			
	BD	WO 00/12488	03/2000	WIPO			
	BE	WO 98/43641	10/1998	WIPO			
	BF	WO 98/38174	09/1998	WIPO			
	BG	GB 2 272 216 A	05/1994	Germany			
	BH	JP 10-77286	03/1998	Japan			See English Language abstract
	BI	JP 3048666	03/1991	Japan			See English Language abstract
<b>OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)</b>							
	CA	Akita et al., "Cross-Coupling Reaction of Chloropyrazines with Acetylenes," Chem. Pharm. Bull. 34:1447-1458 (1986).					
Examiner:				Date:			

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		August 20, 2003	2855
<b>OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)</b>			
	CB	Alvernhe et al., "Action De L'Acide Fluorhydrique Sur Les Azirines: Synthese D'a-Fluorocetones et de Difluoroamines – Etude de L'Orientation de la Reaction," Tetrahedron Letters 21:1437-1440 (1980).	
	CC	Badiger et al., "Oxidative Cyclization Using Fetizone's Reagent," Indian J. Chem. 16B:71-75 (1978).	
	CD	Benincori et al., "Studies on the Fischer Indole Synthesis: Rearrangements of Five-, Six- and Seven-membered Cyclic Hydrazones of Pyrazoline, Tetrahydropyridazine and Tetrahydro-1,2-diazepine Series in Polyphosphoric Acid," J. Chem. Soc. Perkin Trans. 1:2139-2145 (1991).	
	CE	Bremmer et al., "Elevated CSF Corticotropin-Releasing Factor Concentrations in Posttraumatic Stress Disorder," Am. J. Psychiatry 154:624-629 (1997).	
	CF	Chellappa et al., "PMR Spectra of Some Substituted Pyrazines & 2,3-Dihydropyrazines," Indian Journal of Chemistry 21B:778-779 (1982).	
	CG	Hamazaki et al., "The Photoreaction of 5-Aryl-2, 3-dicyanopyrazine in the Presence of Diethylamine," Bulletin of Science and Engineering Research Laboratory Waseda University 103:35-38 (1983).	
	CH	Heinrichs et al., "Anti-Stress Action of a Corticotropin-Releasing Factor Antagonist on Behavioral Reactivity to Stressors of Varying Type and Intensity," Neuropsychopharmacology 11:179-186 (1994).	
	CI	Iredale et al., "Differential Regulation of Corticotropin-Releasing Factor <sub>1</sub> Receptor Expression by Stress and Agonist Treatments in Brain and Cultured Cells," Molecular Pharmacology 50:1103-1110 (1996).	
	CJ	Kalin et al., "Restraint stress increases corticotropin-releasing hormone mRNA content in the amygdala and paraventricular nucleus," Brain Research 656:182-186 (1994).	
	CK	Menzaghi et al., "Characterization of a Novel and Potent Corticotropin-Releasing Factor Antagonist in Rats <sup>1</sup> ," Journal of Pharmacology and Experimental Therapeutics 269:564572 (1994).	
	CL	Mitchell et al., "The Role of Corticotropin Releasing Factor in Depressive Illness: A Critical Review," Neuroscience and Behavioral Reviews 22:635-651 (1998).	
	CM	Ohta et al., "Anti-Platelet Aggregation Activity of Some Pyrazines," Biol. Pharm. Bull 20:1076-1081 (1997).	
	CN	Ohta et al., "Coupling Reaction of Chloropyrazines and their N-Oxides with Tetraphenyltin," Heterocycles 24:785-792 (1986).	
	CO	Schulz et al., "CP-154,526: A potent and selective nonpeptide antagonist of corticotropin releasing factor receptors," Proc. Natl. Acad. Sci. USA 93:10477-10482 (1996).	
Examiner:		Date:	

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	CP	Smagin et al., "Corticotropin-releasing factor receptor antagonist infused into the locus coeruleus attenuates immobilization stress-induced defensive withdrawal in rats," Neuroscience Letters 220:167-170 (1996).	
	CQ	Smagin et al., "CRF Receptor Antagonist Attenuates Immobilization Stress-Induced Norepinephrine Release in the Prefrontal Cortex in Rats," Brain Research Bulletin 42:431-434 (1997).	
	CR	Taylor et al., "Intramolecular Diels-Alder Reactions of 1, 2, 4-Triazines. Routes to Condensed Pyrazines via Cycloaddition of Nitrile Dienophiles," J. Org. Chem. 54:1245-1249 (1989).	
	CS	Taylor et al., "Synthesis of Pyridines by Diels-Alder Reactions of Hetero-Substituted 1, 2, 4-Triazines with Enamines and an Enaminone," J. Org. Chem. 54:1249-1256 (1989).	
	CT	Vinot et al., "No. 797. - Synthese de pyrazines," Bulletin de la Societe Chimique de France 12:4970-4974 (1968).	
	CU	Yamagami et al., "Measurement and Prediction of Hydrophobicity Parameters for Highly Lipophilic Compounds: Application of the HPLC Column-Switching Technique to Measurement of log P of Diarylpyrines," Journal of Pharmaceutical Sciences 88:1299-1304 (1999).	
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